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ABSTRACT

A discussion of the sources of certain language universals argues that adjective/noun constructions pattern similarly to genitive/noun and relative-noun constructions because they are typical diachronic sources for adjectivals, and that relatives and genitives have the same diachronic source and thus the same set of synchronic behavior. It is also argued that the process by which relative clauses and genitives are produced can result in preposed relative clauses only in verb-final languages. Examples are drawn from a number of Nilo-Saharan, Semitic, Chadic, Cushitic, Niger-Congo, Sino-Tibetan, Austronesian, Australian, Indo-European languages, from two isolates, and from one (Hua) difficult-to-classify language. The paper presents an extensive examination of the Agaw language group. (Author/MSE)

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On the Diachronic Source of Linguistic Universals

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1 INTRODUCTION

Since Greenberg (1966) observed that modifiers tend to serialize on one side of their heads, attempts have been made to understand the motivation for this generalization. All approaches, however, presuppose general principles for which there is little external evidence. Lehmann (1973) proposes a dichotomy between "consistent" and "inconsistent" languages, Vennemann (1976) defines a principle of Natural Serialization, while Hawkins' (1979, 1983) suggests a principle of "Cross-category Harmony." There is nevertheless no obvious synchronic reason why relative clauses should pattern analogously to genitival phrases, or either should be constrained by the order of verb and argument.

This paper argues that these patterns are rather a result of the diachronic source of the constructions. I suggest that adjective/noun constructions pattern similarly to genitive/noun and relative-noun constructions because these are typical diachronic sources for adjectivals, and that relatives and genitives have the same diachronic source, and thus the same set of synchronic behavior. I also argue that the process by which relative clauses and genitives are produced can result in preposed relative clauses only in verb-final languages. This complex of varying diachronic sources for the constructions results in the pattern of typological universals Greenberg first isolated.

2 THE ARGUMENT

In the first part of the paper, I shall argue that relatives and adjectivals pattern similarly because genitives and relatives typically arise from the same anaphoric construction, and genitives and relatives are a typical diachronic source for adjectival forms. First let us look at the superficial evidence for a relationship between the markers of the genitive and the relative clause. As Table 1 shows, a large number of languages treat the two constructions as if they had some quality in common:

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1. GENITIVE AND RELATIVE: COMPARATIVE MORPHOLOGY

Language	Relative Clause Marker		Genitive Marker	
Nilo-Saharan				
Anywa		*mana/mo*	*sg.*	*ma-r*
			pl.	*mo*
Luo		*ma*	*sg.*	*ma-r*
			pl.	*mo-g*
Lotuxo	*msg.*	*ǫllǫ*		*ǫlǫ*
	fsg.	*anna*		*ǫnǫ*
	pl.	*xullo*		*xulo*
		xunna		*xuno*
Bari	*m.*	*lǫ*	*msg.*	*lǫ*
	f.	*na*	*fsg.*	*na*
			pl.	*ti*
Semitic				
Aramaic		*di:*		*di:*
Hebrew		*še*		*še*
Akkadian		*ša*		*ša*
Amharic		*yā-*		*yā-*
Ge'ez		*zā-*		*zā-*
Chadic				
Hausa		*-(i)n-da*		*-(i)n*
Cushitic				
Rendille	*m.*	*-ki*	*m.*	*-ki*
	f.	*-ti*	*f.*	*-ti*
Niger-Congo				
Fula		*∅ ~ Gen/Rel. Concord*		*∅ ~ Gen/Rel. Concord*
Sino-Tibetan				
Chinese		*de*		*de*
Lahu		*ve*		*ve*
Austronesian				
Tagalog		*-ng*		*-ng*
Palauan	*Hum.sg.*	*-ɕl*		
	Hum.pl.	*-ir*		
	Non-Hum.	*-ɕl*		*-ɕl*
Yapese		*-n*		*ni*
Woleaian		*-l*		*le*
Australian				
Nunggubuyu		*-yiñuŋ*		*-yiñuŋ*
Many Languages		*-ku*		*-ku*
Bandjalang		*-na:*		*-na:*
Indo-European				
Old Persian		*hya*		*-hya*
Isolates				
Sumerian		*-(a)k*		*-(a)k*
Japanese		*no ~ ∅*		*no*
Unclear				
Hua		*-ma'*	*sg.*	*ma'*
			pl.	*-'i/-di'*

Since the data in the table is unanalyzed, some of the morphemic similarity may be based on sheer chance. However, it is unlikely that all these languages could randomly have acquired the similarity. The similarity can be neither genetic, nor areal, since the languages are drawn from a wide variety of families and a diverse set of geographical areas. Only one explanation for the pattern seems to remain, then: the similarity is generated by what is normally called a "universal" process.

In an attempt to isolate the motivation for the above pattern, let me now examine one section of the data mentioned, the Agaw sub-group of Cushitic. Because of time considerations, I will use only this one language group as an example. However evidence from other African languages, as well as from Australian and Amerindian languages, suggests that the phenomenon here discussed is found generally across the world.

3 THE AGAW LANGUAGES

The Agaw languages have a fairly extensive case-system, formed by the affixation of suffixes to the word-stem. The genitive, however, stands outside this system, for it is a form which agrees in gender with the head noun of the genitival phrase:

(2)

aqi-w	*du:ri*	*aqi-t*	*du:ra*
man-M.GEN	rooster	man-F.GEN	hen
"The man's rooster"		"The man's hen."	

aqi-k^w	*du:r-ka*
man-PL.GEN	chicken-PL
"The man's chicken's"	

[Awngi]

Now, in some Agaw languages another genitive exists, marked with a suffix which varies for noun-class but not for gender. It does not agree with its head noun:

(3)

gērw-i	*gēdēŋ*	*gērw-i*	*gāna*
man-GEN	dog	man-GEN	woman
"The man's dog"		"The man's woman"	

[Bilin]

The two genitives are similar in that both mark alienable possession, but differ in one crucial way: the agreeing genitive morpheme and only the agreeing genitive morpheme can itself take affixes, for the head noun can be deleted:

(4)	*gĕrwi-x^{w}*	*gĕrwi-^{w}-di*
	man -GEN.M.SG	man -GEN.M.SG-COM
	"The man's (masc.) one."	"With the man's (masc) one"

[Bilin]

The agreeing genitive, then, acts exactly as if it were an anaphor in its own right, one which happened to be suffixed to the nominal which it was semantically closest to.

Now, the evidence that the morphemes which make up the agreeing genitive are diachronically derived from pronouns is very strong indeed. First, forms of the morpheme, given in (5), can be reconstructed to give a masculine **-ku*, a feminine **-ti* and a plural **-kun*, which are essentially identical to the known Cushitic deictic pronouns.

(5) The Agreeing Genitive in Agaw

	Bilin	**Khamir**	**Quara**	**Kemant**	**Awngi**
Masculine	*-x^{w}*	*-w*	*-w*	*-γ/-γ^{w}*	*-w/-γ^{w}/-u*
Feminine	*-ri*	*-y*	*-y*	*-y*	*-t(i)*
Plural	*-w*	*-k^{w}*	*[+round]*	*-w*	*-ku/k^{w}*

Second, the agreeing genitive has a highly idiosyncratic morphology: it is formed by suffixing the gender-specific morphemes given above to the non-agreeing genitive, as we can see in (6):

(6) Bilin: Formation of the Agreeing Genitive

	Absolute	**Non-agreeing Genitive**	**Agreeing Genitive**
"dog"	*gĕdĕŋ*	*gĕdĕŋ*	*gĕdĕŋĕx^{w}*
"man"	*gĕrwa*	*gĕrwi*	*gĕrwix^{w}*
"men"	*gĕrĕw*	*gĕrĕwā*	*gĕrĕwāx^{w}*
"woman"	*gāna*	*gānar*	*gānarĕx^{w}*

The evidence, then, argues that the agreeing modifier morphemes were actual pronouns, pronouns which referred back to the semantic head-nouns of the

genitival construction in which they existed, and thus agreed with these. The pronoun, then, would have been the syntactic head-noun of the construction in apposition to the head-noun, e.g. (7)

(7) HEAD-NOUN, POSSESSOR-NOUN, PRONOUN

Such a construction would have been analogous to an English string like: "The book, the man's one".

Exactly the same contrast exists for some Agaw languages, e.g. Bilin, with regard to relative clauses. There are two relative strategies, one without agreement between head-noun and verb, e.g. no. (8) in your handout:

(8) *sĕxant* *-a* *gĕrw* *-ĕd*
be-merciful -REL man -DAT
"To the man who is merciful"

The other takes the agreeing modifier, e.g. no (9):

(9) *gĕrw* *-ĕd* *sĕxant* *-ā* *-x^w* *-ĕd*
man -DAT be-merciful -REL -M.SG -DAT
"To the man who is merciful"

It thus seems to be the case that exactly the same syntax as appeared with genitival constructions is found with relative verbs, as we see in (10):

(10) HEAD-NOUN, RELATIVE-CLAUSE, PRONOUN

It is important to observe that with both the agreeing relative and the agreeing genitive, the modifier clause typically follows its noun, and the agreeing modifier marker takes all case-marking relevant to the whole NP or clause. With the agreeing modifier, there is thus generally no case-agreement between the head-noun and its modifier. The correct bracketing for the agreeing modifier at the time of its formation is seen in (11a):

(11) a. $[_S\ [_{MOD}$HEAD MODIFIER$]_{MOD}$ PRO$]_S$

For the genitive we thus have the structure in (11b):

(11) b. $[_S\ [_{MOD}$HEAD GENITIVE$]_{MOD}$ PRO$]_S$

And for the relative we have the structure in (11c):

(11) c. $[_S\ [_{MOD}$HEAD RELATIVE-CLAUSE$]_{MOD}$ PRO$]_S$

The PRO is thus essentially in apposition to the head noun, and is acting as the core argument of the main clause, for the PRO is the one argument which must take case-marking appropriate to the whole relative or genitive clause. This is quite different from the situation in the non-agreeing relative, where it is the Head Noun itself which takes all the appropriate case-marking.

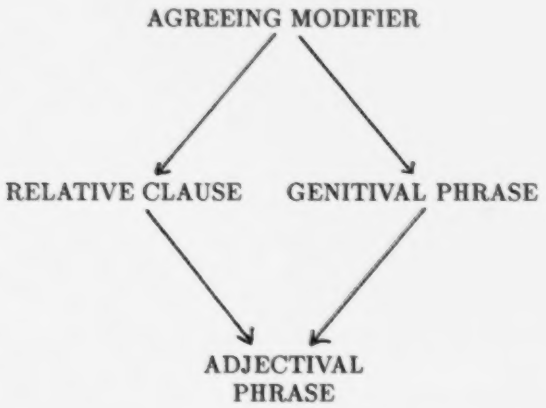
The evidence seems to argue, then, that both the genitival phrase and the relative clause formation were so similar that when new relatives and genitives were being generated in the Agaw languages, they were handled by exactly the same strategy, and thus appear with almost identical morphology. This strategy is a very common one cross-linguistically with NP's which are in some sense "heavy", or at least highly topical, and entails the binding of the NP into the higher clause by means of a clearly marked anaphoric relation. In Agaw, I will call the strategy the "anaphor-binding" strategy.

Now, only some of the Agaw languages possess two kinds of genitive and two kinds of relative. In others, for example Awngi, the agreeing modifier has ousted the older non-agreeing forms. Diachronically, then, we see the agreeing modifier strategy as the ancestor of the genitive and relative constructions for the language. They are also the ancestors of the sole productive adjectival formation in Quara and Khamir, as shown for example in (12):

(12)	*lābbāk*	*-i*	*-x^{w}*	*lābbāka*
	heart	-GEN	-M.SG	heart(Abs)
	"wise"			"heart"

We may recapitulate the diachronic sequence for the constructions under discussion in (13):

(13) THE DIACHRONIC DEVELOPMENT OF MODIFIER PHRASES IN AGAW



4 CONCLUSION

Now, I would argue that the Agaw data provides crucial evidence for understanding the motivation for the Greenbergian universals.

First, they show that the genitive and relative pattern similarly in Agaw, and show similar morphology, not because of some necessary synchronic relationship, but because of their common diachronic origin in the agreeing modifier construction.

Second, they show that the Agaw adjective has ordering patterns similar to those found in genitive and relatives because this is the actual diachronic source for the adjectivals. Adjectives were once genitives and relative clauses.

I would suggest, then, that the Agaw evidence argues that the reason why genitives, relatives and adjectivals pattern so similarly in languages across the world is that genitives and relatives typically arise from the same anaphoric construction, and that genitives and relatives are a typical diachronic source for adjectival forms.

What it does not explain, however, is the relation between the order of verb and argument in main clauses, and the order found in modifiers. As Greenberg himself observed, one may loosely assert that modifiers tend to precede their nominals in verb-final languages, but follow them in verb-initial languages. Other languages are more mixed.

In this regard the Agaw languages offer an interesting insight. Let us suppose that the Agaw anaphor-binding strategy is not an Ethiopian idiosyncrasy, but a fairly standard means of binding relative and genitive NP's into higher clauses. Then we can list the possible structures which the anaphor-binding strategy predicts for internal and externally headed clauses when they appear in conjunction with a main verb in a verb-final language. These are as follows. I use MOD for the relative or genitive phrase or clause, and MAIN for the higher clause and its arguments. (14 a, b, d, and d) illustrate this:

(14) a. [$_S$ [$_{MOD}$ ARG (V)]$_{MOD}$ [$_{MAIN}$PRO V]$_{MAIN}$]$_S$

b. [$_S$ [$_{MOD}$ PRO (V)]$_{MOD}$ [$_{MAIN}$ARG V]$_{MAIN}$]$_S$

c. *[$_S$ [$_{MAIN}$ ARG V]$_{MAIN}$ [$_{MOD}$PRO (V)]$_{MOD}$]$_S$

d. *[$_S$ [$_{MAIN}$ PRO V]$_{MAIN}$ [$_{MOD}$ARG (V)]$_{MOD}$]$_S$

Now, here we find an interesting fact. If a language is to preserve its verb-final clause-structure, only two of the four possible structures are possible. Numbers (3) and (4) are impossible, for they will produce sentences where the main verb appears medially. Number (1) will produce an Agaw-like agreeing modifier construction, and number (2) will produce an orthodox SOV-type prenominal modifier.

Exactly the opposite phenomenon appears if we consider the possible strings which could be generated in a verb-initial language. Here, as (15) shows, only postnominal modifiers can be generated while still preserving verb-initial syntax.

(15) a. *[$_S$ [$_{MOD}$ (V) ARG]$_{MOD}$ [$_{MAIN}$V PRO]$_{MAIN}$]$_S$

b. *[$_S$ [$_{MOD}$ (V) PRO]$_{MOD}$ [$_{MAIN}$V ARG]$_{MAIN}$]$_S$

c. [$_S$ [$_{MAIN}$V ARG]$_{MAIN}$ [$_{MOD}$(V) PRO]$_{MOD}$]$_S$

d. [$_S$ [$_{MAIN}$V PRO]$_{MAIN}$ [$_{MOD}$(V) ARG]$_{MOD}$]$_S$

I will not list the possible strings for an SVO language. However, these will obviously pattern like verb-final languages for subjects, and allow the possibility of the generation of prenominal modifiers for these, while all other nominals will pattern like verb-initial languages, and allow only post-nominal modifiers.

These are exactly the predictions which typological studies would indicate to be correct.

I would argue, then, that the reason why adjectives, relatives and genitives pattern similarly is because relatives and genitives typically have their diachronic source in an anaphor-binding construction of the type here discussed, and that adjectives pattern similarly to these because adjectivals typically have their diachronic source in genitives and relative clauses. I would further suggest that the ordering of elements found between modifiers and their nouns is a direct result of the necessity to preserve the canonical order of verb and argument in the higher clause during the generation of such constructions.

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